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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/014,846	12/14/2001	Mark G. Torchia	85058-202 ADB	1835

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CANADA

EXAMINER

JUNG, WILLIAM C

ART UNIT PAPER NUMBER

3737

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/014,846	Applicant(s) TORCHIA ET AL.	
	Examiner William Jung	Art Unit 3737	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 40-95 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 40, 41, 44-50, 53-64, 66-73, 75-80, 83-88, and 92-95 is/are rejected.
- 7) ☒ Claim(s) 42, 43, 51, 52, 65, 74, 81, 82 and 89-91 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed July 9, 2004 have been fully considered but they are not persuasive.

Diederich clearly anticipates all claimed features in claims 40-56. Although, Diederich uses ultrasound to apply heat to the target volume, the use of laser to deliver heat therapy or treatment to the target volume is well known and disclosed (col. 1, line 60 – col. 2, line 6). More specifically, Diederich describe that laser is used to heat the conductively heating a catheter.

Diederich's patent as a prior art need not show best mode to provide anticipation.

In addition, contrary to the Applicant's assertion that Diederich does not disclose expansion zone of reduced pressure at the end of the probe body to cause cooling fluid to expand as gas,

Examiner would like to point out to col. 8, line 54 – col. 9, line 16. Diederich clearly anticipates expansion zone of gas, which helps condensation of vapors (heat removal) and evacuation of the condensed moisture from the probe. Therefore, Diederich clearly anticipates all claimed features in claims 40 and 79 and previous rejection from Office Action dated Feb. 26, 2004 is maintained.

Below is a restated rejection reflecting the changes in claims 1-39 (cancelled) and rewritten claims 57-95).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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3. Claims 40-95 are rejected under 35 U.S.C. 102(b) as being anticipated by *Diederich* (US 5,620,479).

Claims 40, 55, 57, 60, 79, and 94: Diederich anticipates all feature elements in claims 40, 55, 57, 60, 79, and 94. Diederich discloses of an ultrasound therapy method and apparatus, where a catheter 12 is designed to place in a living body, invasively placing the catheter to a therapeutically targeted volume. Once the catheter is placed in a desired volume, an HIFU is applied to the targeted tissue to perform therapeutic procedure where the catheter includes distal end with ultrasound transducers 16 providing heat directed that the target volume (col. 3, lines 11-67; col. 6, line 43 – col. 7, line 35). The shape of the transducer is cylindrical or disk like with probe rotation to cover different angle to the treatment volume (col. 12, line 48- col. 13, line 2). In addition, the catheter consists of thermocooling mechanism to remove heat from the probe by circulating pressurized fluid around the heating transducer (col. 3, line 66 – col. 4, line 62).

Claims 58 and 59: Dierderich further disclose that the transducers 16 above are segmented to select different volume heating zone. The heating promotes coagulation of the tissue (col. 3, lines 42-64; col. 4, lines 29-62).

Claims 53, 54, 61, 76, 92, and 93: Diederich also discloses of temperature sensor to generate temperature representation of the heating zone during the therapeutical procedure (col. 4, lines 54-col. 5, line 3).

Claims 50, 56, 62, 73, 75, and 95: Diederich discloses of heat sources consisting of laser or optical light source to direct the thermal control of the heating elements (col. 1, line 60 – col. 2, line 6).

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Claims 41, 44-49, 63, 64, 67-72, 77, 78, 80, and 83-88: The cooling mechanism described above is further disclosed by Diederich as having cooling fluid circulating the transducer with cooling chamber, air for liquid to improve the heating distribution and controlling the heating temperature. The air duct or spacer 22 is arranged inside the outer tube where the tube is supplying heat removal from the transducer (col. 7, line 57 – col. 8, line 7).

Claim 66: Diederich discloses of power deposition control, which increases or reduces heating of the transducer segment (col. 4, lines 29-62).

Allowable Subject Matter

4. Claims 42, 43, 51, 52, 65, 74, 81, 82, and 89-91 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to William Jung, Ph.D. whose telephone number is 571-272-4739. The examiner can normally be reached on Mon-Fri 8:30 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571-272-4956. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

WJS

January 20, 2005


BRIAN L. CASLER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2700